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DES MOULINS'

GENERAL CONSIDERATIONS

ON

RESTRICTING THE NUMBER OF SPECIES

OF THE

GENERA UNIO AND ANODONTA;

TRANSLATED FROM THE FRENCH,

BY PHILIP H. NICKLIN, A. M.

OF PHILADELPHIA.

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Prefatory Remarks by the Translator.

The paper of Mr. Charles des Moulins, now offered in an English translation, possesses merits of a very high order. It criticises without acrimony, and praises without flattery ; it is scientific without pedantry, and philosophical without obscurity. It is imbued throughout with the enlightened spirit of catholic Christianity, which does honor to the writer, and is a favorable symptom of the moral condition of the scientific world.

Mr. Des Moulins was the predecessor of Dr. Graleloup in the presidency of the Linnæan Society of Bordeaux, and is doubtless a naturalist of a high order. On the presentation of the 2nd volume of Mr. Isaac Lea's Conchological Observations to the Linnæan Society, Mr. Des Moulins requested of the Society to be charged with the '*Rapport*,' on account of his familiar knowledge of the English language, acquired during a long residence in Great Britain. In a letter to Mr. Lea he observes, "as I felt obliged to speak my thoughts plainly in the *rapport*, I ventured to give an explanation of the principles and method on which I would rely, for an enucleation of the *true* species from amidst the mere forms and differences of sex and age, and in short from all sorts of varieties. This theoretical part of my paper, the Linnæan Society have judged fit to be printed in their transactions." "As for the second part of my work, which was plainly the Report on your volume, it was not admissible in such a kind of review as our transactions, where original writings only can be admitted, and it is not worth my sending a manuscript copy. Let me only tell you that I gave a numerical account of the species of each genus you described, that I criticised your changing the Lamarckian generic name *Iridina*[*] for *Platiris*, and the specific one of *Iridina rostrata*, Rang, for *cœlestis*, while it remains evident by your own plate, that the shells are exactly the same. I did specially point to your excellent anatomical researches on the animals of Naïades, and to that valuable Synoptical Table, on which you must have toiled so long and so hard, to enubilate the tremendous synonomy of those poor shells. Lastly, after some other analytical details, I ended my report as follows:

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[*] If 'Iridina' had been retained for the genus, it would have been necessary to strike from Lamarck's generic description the following phrase, "*per longitudinem tuberculosus, subcrenatus ; tuberculis inæqualibus, crebris ;*" because the *Iridina rubens* and its fellows, now forming Mr. Lea's subgenus *Spatha*, do not fulfil that cardinal condition : it was therefore manifestly proper to adopt a new name for the

"Tel est Messieurs, le bel ouvrage dont votre bibliothèque vient d'être enrichie par la générosité d'un des plus laborieux de vos correspondans. Favorisé par toutes les circonstances qui facilitent et encouragent les travaux du naturaliste, Mr. Lea vous donne l'espoir de voir les siens se multipliér chaque année, ainsi que ses titres à la reconnaissance des savans. Témoignez-lui la vôtre, Messieurs, par l'organe de M. le Secretaire Général, car elle est bien méritée, et je le demande comme justice, a la Société Linnéenne, en terminant ce rapport."

The paper of Mr. Des Moulins, though critical, is highly honorable to the labors of our countrymen, shewing that they are casting their mites into the general treasury of the world's knowledge. The tribe of the Naïades is one of the most interesting of Nature's families, dwelling in cells of pearl, adorned within, with all the hues of flowers and brilliant rainbow dyes, inhabiting every crystal lake and running stream of this terraqueous globe. Man doth press with wandering foot no river bank, nor margin of translucent lake, but there a lovely Naïs doth wait and woo his admiration;

> —"candida Naïs
> Pallentes violas et summa papavera" *ferens.—Virg. Ecl.* 2, *l.* 46.

This is more abundantly the case in our own youthful country, which, as Mr. Des Moulins justly observes, is "évidemment la patrie privilégiée des Unios et des Anodontes;" it is therefore not surprising that our young naturalists should have directed their researches with great enthusiasm towards that interesting branch of natural history, in the beautiful subjects of which our country abounds so much more than all other parts of the world. Mr. Des Moulins arrives at a just conclusion, when he says, "Il vaut probablement mieux lâcher encore les rênes, pendant quel-

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genus, and to use Lamarck's name *Iridina* for the *subgenus*, in which are arranged all the species which conform to his generic description. It would not have been expedient to make two genera, because the animals of *Iridina* and *Spatha* are supposed to be nearly identical.—*Translator's Note.*

ques années, aux collecteurs, aux observateurs, aux faiseurs d'espèces même, pour ne pas les decourager; et pour laisser ainsi s'augmenter notablement la masse des matériaux;" so that, when the heap of knowledge shall be thus "*notablement augmentée*," some future classifier, endowed perhaps with a Linnæan power of generalizing, may extinguish the superfluous species, and arrange the remainder in exact scientific order.

Mr. Des Moulins wears his Christian mantle with so much grace and courage, that he has even quoted Saint Augustine for a profound generalization of the works of God. And perhaps in this matter the saint has excelled the *savant;* for the latter offers the following exposition of the three kingdoms:

Mineralia crescunt,
Vegetabilia crescunt et vivunt,
Animalia crescunt et vivunt et sentiunt;

but the former says:

Quædam sunt, i. e. Mineralia;
Quædam sunt et vivunt, i. e. Vegetabilia;
Quædam sunt, vivunt et sentiunt, i. e. Animalia.

Mr. Des Moulins seems to be in error in making *growth* a predicate of minerals. He applauds Linnæus for having borrowed "*presque textuellement à Saint Augustin les trois premiers termes de cette magnifique progression d'institution divine*," and yet himself departs from the Augustinian text by substituting *crescere* for *esse;* and as he departs, so far he errs.

The Linnæan scheme is as follows:

Lapides corpora *congesta*, nec viva, nec sentientia.

Vegetabilia corpora *organisata et viva*, non sentientia.

Animalia corpora *organisata et viva et sentientia*, sponteque se moventia.

Minerals are bodies *aggregate*, not living nor perceiving.

Vegetables are bodies *organic and living*, not perceiving.

Animals are bodies, *organic*, *living and perceiving*, and moving of their own accord.

The schemes of the two modern philosophers, when compared with that of the ancient divine, seem to be deficient in severity and precision.

Young naturalists will find Mr. Des Moulins' paper an interesting and improving study; and the application of its principles need not be restrained to the branch of natural history in discussion in its pages. The important question, "*what is species?*" which he asks but does not answer, seems to present itself at the beginning of every arrangement; and that naturalist would be canonized who should answer it in a manner acceptable to all.

The definition given by Milne Edwards in his Elémens de Zoologie, seems to be sufficient for the purpose of arrangement: "On donne le nom d'espèce à la réunion des individus qui se reproduisent entre eux avec les mêmes propriétés essentielles."

P. H. N.

Philadelphia, April 10, 1841.

General Considerations on the Reform which ought to take place in restricting the number of Species of the genera Unio and Anodonta. Presented to the Linnæan Society of Bordeaux, at its sitting of the 5th of July, 1839, on the occasion of the publication of Mr. Isaac Lea's second volume of Conchological Observations. By Ch. Des Moulins, Member of the Linnæan Society of Bordeaux, &c.

Gentlemen—An able designer had arranged, in a hundred adjoining compartments, a hundred figures, of which each one differed so little in appearance from its neighbor, as to be indistinguishable at the first glance. The first was the figure of the Apollo Belvidere, the last was that of a frog. This curious comparison shadows forth a relation little flattering to the physical man, but of much importance in a *philosophical** point of view, in the sense now attached to this word. It is the graphic representation of the celebrated maxim of Linnæus, *Natura non facit saltum*—'Nature makes no leaps.'

But really, gentlemen, what is nature? Nature, according to the notion of Linnæus, in the opinion of Christians, in truth is nothing else than the *whole of those laws*, or *material order*, which God imposed on physical things when he created them. Now gentlemen, this saying of Linnæus is admirable, it is profound, it is true in the *material order*, the object at once of the study and teaching of the Professor of Upsal; and the more worthy it is of our respect, the greater is the necessity of adding to it a commentary, restraining its scope within the bounds contemplated by its immortal author.

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* The use of this word often appears to me grammatically absurd; sometimes, instead of it, we ought to say *physiological*, but oftener *metaphysical;* but unfortunately the latter frightens children, even children of all ages.

This saying is true; observe its justness from kingdom to kingdom; behold the close connexion of the mineral with the vegetable kingdom, in those innumerable crystals which form the microscopic quasi skeleton of the stem of the Cactæa, and of so many other plants; behold it also, though in a different form, in those *Chara*, so delicate as to be always protected by a stony covering; observe the relation between the mineral and the animal kingdoms, in those curious madrepores, of which the frame-work, entirely mineral, is secreted by a feeble living jelly; behold, finally, that of the animal with the vegetable kingdom, in those corals which unite the essential composition of the former with the flexibility and the appearance of the laws of growth of the latter: *Natura non facit saltum.*

Let us proceed, and this maxim will shed more light. It is not a simple line of junction that marks the boundary between the inorganic and the two organic kingdoms; they go even to a superposition, or if I may invent a term to express my idea, to a *superaddition*, so constant as to form one of the essential laws of the physical world. Nothing is purely animal, nothing is purely vegetable, since every organic substance is reduced, by analysis, to inorganic elements. The mineral or inorganic kingdom is, then, the primary matter of the physical world—matter which its Creator has set in action and modified by *superadding* other principles entirely foreign to it: *Natura non facit saltum.*

But observe, gentlemen, this wonderful concatenation: the inorganic kingdom, which enters into the composition of all physical things, is subject to *all universal* laws, and is limited by *one only* of those which govern more *complicated creatures:* MINERALIA CRESCUNT; behold the basis of the physical world. God works, and *superadds* the principle of vegetable life, hidden from our feeble intellect: VEGETABILIA CRESCUNT ET VIVUNT. God works again, but in another direction, and *superadds* the principle still more mysterious and sublime, of animal life, of sensation, of volition: ANIMALIA CRESCUNT, VIVUNT ET SENTIENT. Here you still perceive, *Natura non facit saltum.*

The naturalist stops here; he stops where stopt the mind of the great classifier of material things, at the bound which necessarily limited the extent of his immortal maxim. Linnæus, after having borrowed, almost in very phrase from Saint Augustine, the first three terms of this divinely instituted magnificent progression, stops before the fourth term,[*] which did not concern him at that moment, or rather he transfers to another place its expression, and guided by his sublime genius, and still more by the bias of his religious heart, places it in the specific name which he has given to man: Homo Sapiens.

And now, gentlemen, behold the curtain is raised; for in this double name is fully expressed the double substance of the privileged being. By one of his two essences, he stands on the summit of the ladder whose descending steps degrade him to a frog; and by a further descent even to a monad: by the other, he is placed on the lowest rung of the sublime ladder of created intelligences. But, let us speak to our senses: there is a point, in the hundred compartments of which I first spoke, where the *homo sapiens* finishes, a point where the *brute* begins; there is the impracticable *leap*, *the gulf* without a bridge, which separates the immaterial from the physical creation: there is the immense, the impenetrable abyss, which the hand of the Almighty has left between the Apollo and the frog.

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[*] Quædam enim tangis[†] ut sint, non tamen ut vivant, sentiant et discernant; quædam verò tangis ut sint et vivant, non tamen ut sentiant et discernant; quædam verò tangis ut sint, vivant et sentiant, non tamen ut discernant; quædam verò tangis ut sint; vivant, sentiant et discernant.—August. *Medit. Cap.* 29, § 3.

Some things thou commandest *to be*, but not to live, perceive, and understand; some thou commandest *to be and live,* but not to perceive and understand; some thou commandest *to be, live, and perceive*, but not to understand; and some thou commandest *to be, live, perceive, and understand.*

And lest it should be supposed that such a passage could flow from his pen unintentionally, and without sufficient reflection and long meditation, I quote here what Saint Augustine says upon the same subject in another of his works.

Non eram, et creasti me; nihil fueram, et de nihilo me aliquid fecisti. Quale autem aliquid? Non stillam aquæ, non ignem, non avem vel piscem, non serpentem, vel aliquid ex brutis animalibus; non lapidem vel lignum, non ex eorum genere quæ tantum habent esse, vel ex eorum quæ tantum esse possunt, et crescere; non ex eorum genere quæ tantum esse et crescere et sentire possunt; sed super omnia hæc, voluisti me esse ex his quæ habent esse, quia sum; et ex his quæ habent esse et crescere, quia sum et cresco; et ex his quæ sunt, crescunt et sentiunt, quia sum, cresco et sentio: et paulò minùs parem me creasti angelis, quia rationem te cognoscendi, cum ipsis à te communem accepi.—August. *Soliloq. Cap.* 7, § 4.

I was not, and thou createdst me; I had been nothing, and of nothing thou madest me something. But what? not a drop of water, not fire, not a bird, nor a fish, not a serpent, nor any irrational animal; not a stone, nor a stock, nor any of that kind which can only *be*, nor of that which can only *be* and *grow;* nor of that which can only *be*, and *grow*, and *perceive;* but above all these, thou hast willed me to be of those which can *be*, because I *am;* and of those which can *be* and *grow*, for I *am* and *do grow;* and of those which can *be, grow, and perceive*, for I *am, do grow, and do perceive;* and thou hast created me a little lower than the angels, because in common with them I have received reason, by which I am able to know thee.

Saint Augustine is one of the most astonishing phenomena in the history of the human mind. With what power of observation and reasoning must this African bishop have been gifted, who being neither evangelist nor prophet, but merely a doctor of the church, yet aided by the Bible, advanced fourteen hundred years beyond his age in scientific discovery!

[†] I have not rendered the verb *tangere* by its common English equivalent *to touch*, because it is plain that things must first be created before they can be touched, and because the Bible informs us that God created all things by his word. Saint Augustine uses it to express the action of creative power.—*Translator's note.*

It may seem that these reflections are too high, or too abstruse if you will, to serve as the preamble to a critical examination of certain new species of shells. I do not think so, gentlemen; we can only judge piecemeal; and when the subject is intellectual, the pieces are principles. I thought a full explanation necessary, that you might the better appreciate the elements of the discussion which I propose to submit to your consideration. From what I have stated, I now proceed to draw the single rule that will serve as the basis of my labors.

Between the first and the last of our hundred compartments, there is a point where *the man* ends, where *the brute* begins; a point at which, notwithstanding the imperceptible deterioration of external form, there is a change of nature, a change of material classification, a change of order, a change of class, a change of family, a change of genus, a change of species. This consideration is enough for my purpose; without illustrations, its announcement is here sufficient.

But, gentlemen, the most eminent zoologist now living in France, (M. de Blainville,) stated twelve or fifteen years ago, that in considering the embarrassing variety of forms then known in the genera *Unio* and *Anodonta*, he felt the necessity of enquiring, whether, if the two genera* were joined again into one, as their comparative anatomy requires, *that one* should present to the classifying naturalist, an almost endless series of really distinct species, or only *one species* infinitely variable in its forms.

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* In March, 1829, the translator expressed the opinion, "that the seven genera, now referred to the family of *Naïades*, are founded in artificial distinctions, and not in nature; and that in fact the family contains but one genus."—*Trans. of the Amer. Phil. Soc., Vol.* 3, *p.* 398.

I do not think that M. de Blainville, seeing the rich materials since published by Mr. Isaac Lea, would now feel a similar hesitancy. It may be supposed, that in a series of specimens more or less numerous, selected with care from the different domestic and foreign forms, the passage may be almost insensible from the immensely large cardinal teeth of the *Unio crassissima* to the toothless hinge of the *Anodonta cygnea*. But if a hundred specimens be necessary to pass through all these successive gradations; I dare say another series of different specimens quite as numerous, would be required to pass insensibly from the very round form of the *Unio circulus* to the linear form of the *Unio rectus*, exhibiting successively all the modifications of form contained between these extremes; and I warrant that still new series almost as numerous, would be necessary to form a communication between the most solid and stony species of the United States, and the *Unio lævissimus;* which is so thin that atmospheric drought makes it split; or to connect those whose form is almost as compressed as that of certain *Lutrariæ*, with those whose three diameters are nearly equal. In fine, I do not think that a single series, however numerous, can exhibit at once all these combinations, with all these various conditions of gradation. And since it required ninety eight designs, almost entirely imaginary, to make an uninterrupted chain between the Apollo and the frog, what would the number be, when we should find ourselves engaged with nature herself, so rich in resources, so abounding in ornament, so inexhaustible in the variety of forms that she exhibits to our admiration.

But in the same manner, (and even oftener than the ladder of ninety eight steps which separates the Apollo from the frog,) comparative anatomy, (which also offers us a clear scale of perceptible gradations,) discovers to us the successive and gradual changes of *orders*, of *classes*, of *families*, of *genera* and of *species;* and it is enough to cast the eye over a rich collection of *Naïades*, or over the magnificent figures contained in Mr. Lea's two volumes, to perceive there at the first glance, a certain number of typical forms, distinct, and each surrounded by derivative forms, more or less numerous; which are too closely connected with them to be separated from them, or even to form connecting links between them and other types entirely different.

The truth, in this matter, seems to me then, intermediate to two extreme propositions, between which M. de Blainville seemed to pause some years ago. Yes, I can confidently say, that there really exist several species, nay, many species in the great genus formed by the union of the *Anodontæ* with the *Uniones.* But I may add with equal confidence, that authors have too greatly multiplied these species. Does this criticism apply also to our honorable correspondent, Mr. Isaac Lea? in my opinion it does. The more of peculiar importance that I attach to these types, so well defined, so perspicuous, so distinguished by their forms, of which, the American authors above all, and Mr. Lea more than any of them, have discovered to us the existence, the more I am convinced of the necessity of degrading to the rank of varieties, and often to that of deviations, (as our learned colleague, M. Casimir Picard of Abbeville says,) those variations of form typically the same, those specimens from different localities, which are not identical in the detail of parts, which are neither precisely this, nor exactly that, but which possess a clear and undeniable relationship with such or such a type perspicuously defined. I think that a certain number of Mr. Lea's species would be extinguished by a reform based upon this principle.

But to propose this reform in detail, we should have under our eyes the collection of Mr. Lea itself, probably the richest in the world; or at least a collection very numerous in species and specimens, identified by comparison with all the published figures of authors. To establish such reform irrevocably, still more is necessary; we must have what at this moment may be considered as impossible, *the comparative anatomy of all the pretended species* established by authors. Then only could we be absolutely sure of viewing the question in all its phases. I think I may affirm that we should then find anatomical differences between all true species, and we would rank without scruple among *forms* or *varieties* all those diversities as to length, shortness, &c. which exert no influence upon the internal structure, the number, or the functions of the organs and integuments. Thus, better than in any other way, should we approach the solution of that important question, *what is species?* a question which so much occupies, and still more divides philosophers. Every body demands a definition of species, but a definition *assented to by all.* Definitions, indeed, are not wanting; but common assent sanctioning one exclusively, is entirely wanting, and will perhaps always be so, if I am right in classing among *impossibilities*, the only means of bringing about such assent.

What is to be done, then, in the midst of all these difficulties? How shall we escape the horns of this dilemma; *reform is wanted, but permanent reform is at this time impossible;* nevertheless, on the other hand, *it is absolutely necessary to classify the objects already known, and those which are discovered every day.* There is nothing but provisional arrangement, nothing but system, (and *system* is *artificial* method,) which can rid us of this embarrassment. Let us, then, consult theory, experience, analogy, that we may labor to come at the truth.

Theory says, that there are essential differences between genus and genus, between species and species.

Experience tells us, that dissimilar animals are sometimes found in similar shells, and animals almost identical in shells, apparently very different.

Analogy proposes, under these premises, to draw inductions from the mass of discoveries already made.

Let us take then this immense group, such as MM. de Blainville and Deshayes understood it a few years ago; this group, whose animals they then believed to be *generically identical;* let us begin by lopping off, finally, with M. Deshayes, the *Iridinæ*, with M. D'Orbigny the *Castaliæ*, of which the shell alone did not permit a rational distinction. Then let us reduce, with Mr. Lea, all the other genera of the *Naïades*,* to the simple importance of subgenera or sections, waiting always to withdraw from these, all those species whose anatomical characters when known, shall be found to differ from those of the studied type, in like manner as the *Iridinæ* and *Castaliæ*, and we shall have a genus which will possess only a *supposed unity* in its essential characters, but which on that very account will be conditionally, and therefore theoretically, exact.

Arriving at species, we would proclaim as irrevocably autonomous, those which offered no specific anatomical differences, such as the form of the ovaries studied by Mr. Lea in the *Unio irroratus*, *ochraceus*, *cariosus*, *retusus*, in the *Anodonta undulata* and

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* I say nothing here of the genus *Mycetopoda* of M. d'Orbigny, which I have not at present an opportunity of studying. Mr. Lea does not admit it, any more than that of *Castalia.*

fluviatilis; such as the form of the foot or of the appendices of the mantle in the *Unio radiatus*, &c.

Secondly, we will take for our guide that very important publication which Mr. Lea is at present making of observations made by Dr. Kirtland and himself on the dioïcity of the Naïades, and on the variations of form which it produces in individuals of the same species, and we should thus arrive at the certain and rational extinguishment of many species that authors have established, as Mr. Lea admits, solely upon their external character.

Thirdly, we will apply most rigorously the luminous and solid principles that M. Casimir Picard, of Abbeville, is going to publish, I hope, in a short time, upon the *deviations* or *pathological malformations* of the *Naïades*; and many more species would disappear in the sieve of this physiological scrutiny.

Fourthly, we will examine the laws of the geographical distribution of animals in the different classes, and, governed by analogy, we will not admit cosmopolitan species, except with the greatest reserve; but we will take equal care not to give too much specific importance to a difference of localities or of *habitat* within the limits of the same *zoological region.*

By means of these four considerations, we shall have exhausted all that *experience* and *analogy* offer as regards theory; and it will remain for us,

Fifthly, to resort to artificial method to finish conditionally, with all proper reservations, this great work of reform.

Here we shall be helped in the choice of types by the aid of consideration and combination; 1st, of the general form regarded as the generatrix of the modifications which will constitute simple varieties; 2dly, of the pallial and muscular impressions, and of the ligament; 3dly, of the general system of structure of the appendices of the shell, whether *null*, *pliciform*, *nodulous*, *spinous*, *symphynote* or *not*, (these ingenious divisions are due to Mr. Lea;) 4thly, of the essential and constant character of the structure of the hinge; 5thly, of the thickness of the shell; 6thly and finally, of the general system of coloring; for we must, as Mr. Lea has done in many cases, deny *specific* value to epidermal coloring, and still more to rays so variable in form, in magnitude, and in the different ages, and especially to the superficial coloring of the nacre.

I shall cite as examples of this mode of judging, the entirely peculiar system of coloring of the *Unio irroratus* and *cylindricus;* the unique form of the appendices in the *Unio spinosus* and in the *Symphynota bialata* (Lea, 1st volume;) the peculiar form of the tubercles in the *Unio lacrymosus* and *apiculatus*, &c.

By combining all these means of exact judgment on the one part, and of logical induction on the other, I am satisfied that we shall recognize in the group of the Naïades, as experience has taught us in others, the truth of that observation, whose expression is recorded in the maxim, *Natura non facit saltum*, viz. that exterior unlikeness does not exclude autonomy, and *vice versâ;* or, in other words, that two beings inseparably connected by their essential characters, are often much more unlike in their external appearance, than two beings entirely different in essential characters. The demonstration of this proposition is found by the zoologist, in the *races*, so abounding in varieties, of the dog, the ox, the cock, of man himself compared with the *real* species but little removed, of the quadrumana, the rodentia, the motacillæ, the accipitres, etc. The botanist finds it, in comparing the *races* so prodigiously varied of the pears, the roses, the carnations, of the cereal plants and pot-herbs, with the true species, although differing little in appearance, of the genera *Ranunculus*, *Galium*, *Artemisia*, *Senecio*, *Carex*, *Bromus*, etc. The mineralogist and the geologist find it, as every one knows, at every step of their investigations.

Such, gentlemen, are the principles, upon which, (in default of absolute certainty, perhaps not attainable,) I would reform the demarcation of the species of the family of the Naïades. And I must say, that no philosopher seems to me at the same time more able, and better situated to accomplish it than Mr. Lea himself. But has the time arrived in which he can thus occupy himself usefully? I think not yet. Possessing the richest of *special* collections, Mr. Lea has not yet, however, had the opportunity of inspecting *all* the nominal species. America, where he lives, is evidently the privileged country of the Uniones and Anodontæ, considered with respect to the number of species; but America has not yet been so entirely explored in this point of view, as not to leave a great number of links wanting in that chain, (which should be unbroken if possible,) upon which the reformer should mark his divisions. It would probably be better, still to loose the reins for some years, to collectors, to observers, and even to makers of species, in order to encourage them, and thus induce them to increase greatly the mass of materials. In this latter relation, no author has rendered more eminent services to science than Mr. Lea, in his first volume, which is already in your library, and also in his second, of which I am going to exhibit to you briefly, the contents.

CH. DES MOULINS.